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CHARCOT ON DISEASES OF THE NERVOUS SYSTEM . . . . . 16 PAGES.

## CLINICAL LECTURES.

### ON NERVOUS SYPHILIS.

*A Clinical Lecture delivered at the Charity Hospital, New York.*

By W. H. VAN BUREN, A.M., M.D., Professor of Principles and Practice of Surgery in Bellevue Hospital Medical College.

I propose to close our clinical demonstrations of the venereal diseases by the study of some cases, which have been selected from the wards, of *Nervous Syphilis*. This term is employed to designate the effects of the syphilitic poison upon the nervous centres and the nerves. Our knowledge of these manifestations has grown up entirely within the past thirty years. Dr. Reade of Belfast, Ireland, in 1847, and Dr. Todd of London, two or three years later, first pointed out the true relation between these phenomena and their cause; and the study of the

subject has since occupied some of the best minds in the profession. The result has been an increase in our power of relieving many hitherto obscure forms of nervous disease, which are thus brought within the influence of valid remedies.

The first case is a woman of 30, with a pallid aspect, as you observe, but well nourished, and bearing upon her face several solitary circular ulcers, partially covered with crusts, and seated upon elevated livid bases. She has, also, old pigmented, circular, smooth cicatrices on the legs and thighs. Her history states that in a miscarriage, two months ago, in which a good deal of blood was lost, she became hemiplegic, and in this condition was brought to the Hospital. I am unable to learn from her whether or no she lost her consciousness at the time she became paralyzed, for, as you perceive, she is the subject of exaggerated emotional manifestations of distress, which are not hysterical, but due, rather, to a lack of

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cerebral power suggestive of idiocy. This mental condition, usually described as *Aebetude*, is a not infrequent symptom of nervous syphilis. I once attended a young German merchant who sat most of the time with a vacant expression on his face, and the saliva drivelling from his half-open mouth. His nurse was obliged to give him all his food by the spoonful, and coax him to swallow each mouthful, carefully cleaning out his mouth afterwards to prevent fragments from getting into the larynx—an accident by which he was once nearly choked.

I cannot get any evidence from this woman as to whether she has suffered from headache, but you observe that, whilst the hemiplegia affects the left arm and leg, when I make firm pressure over the right parietal bone, in front, she flinches distinctly. This evidence, in addition to what has been already gathered, justifies the inference that her symptoms are to be explained by lesions of tertiary syphilis developed within the cranium, and on the right side, probably gummy deposit, causing pressure, possibly by syphilitic changes in the cerebral arteries causing obstruction and consequent cerebral anemia; and that, under the judicious use of mercury and iodine, she has a chance of recovery.

The next case is also a hemiplegic woman, of about 40, with partially contracted flexor muscles of the right upper and lower limbs, and paralysis, on the same side, of the face and tongue. Her intelligence has not been impaired. She acknowledges an eruptive disease, which got well under mercury three years ago, and shows at present, circular, smooth, white, depressed scars on her arms, each one of which is surrounded by a delicate zone of pigment. You hear her very interesting statement of her attack: Ten months ago, whilst sitting, reading, she noticed tingling and numbness in the right foot and leg, and in the tongue, and, shortly, lost the power of holding her book. There was no loss of consciousness accompanying the invasion of these symptoms, but they were preceded by headache. They had persisted, and the present condition of contraction gradually

followed. The remains of the facial paralysis are still evident, on the same side as the paralysis of the limbs. She has undergone no active treatment. Probably, if she had, her recovery would have been more complete, without the contraction, for the antecedents and the mode of attack are characteristic of hemiplegia of syphilitic origin. Headache, worse towards night, and better in the morning, with tenderness on firm pressure at some fixed point, and this point, in hemiplegia, almost invariably seated over the front and side of the anterior cerebral lobe, where the motor tract is now proved to be located, is significant of cerebral syphilis; as a precursor of hemiplegic symptoms, it is very rarely absent. It is a symptom never to be neglected in a syphilitic subject.

I have also learned to regard the absence of loss of consciousness at the moment of attack, as characteristic of the syphilitic form of the disease. In hemiplegia from extravasation, loss of consciousness is almost always present for a longer or shorter time varying with the size of the clot. I was called many years ago to a gentleman who, in the effort to get out of bed in the morning, suddenly found himself prostrate in the farther corner of the room, where the discovery that one of his lower limbs was powerless—and the knowledge did not come to him until he had brought the weight of his body upon it—compelled him to call for assistance. I found the upper extremity also paralyzed, but not so completely as the lower. One of his pupils was larger than the other; he had been under treatment, but at irregular intervals, for syphilis. He had gone to bed the night before as well as usual, and was utterly unaware that anything was wrong with him when he first made the effort to spring out of bed. Although actively treated by mercury alone, the improvement in this case was not satisfactory.

The third case, gentlemen, is a young man of 30, a butcher, who, as I learn from the note of his case taken by the House-surgeon, had been "cured," six years ago, of a general eruption recognized as syphilitic, by mercury, which he

took for three months; after this he had an interval of perfect health for four years, and then awoke one morning with *facial paralysis and deafness*, on the right side. According to his own statement, he was not treated for these symptoms, and they gradually disappeared in about six months. Two years afterwards he found one of his legs weak on rising one morning, but got down town, where at breakfast, he noticed that the arm of the same side, also, became so weak that he could not manage his spoon, and the tongue became thick, so that he could hardly speak. These symptoms also passed off shortly, and at the end of an hour he went up town on a street car. In getting off the car, however, he found that his leg had again given out, so that he fell in the street, and was carried into a shop, where he found himself unable to explain his condition, as the "thickness" in his tongue had returned, and he was supposed to be intoxicated. Notice, if you please, as he answers my questions, that his intelligence and memory are unimpaired. Here, again, his symptoms passed off in a little time, so that he was able to walk to the shop of a friend about a block distant. Within the hour, however, they all came back again a little more suddenly and severely, and he lay helpless on the floor until the next day, when not recovering in any degree he was taken to Bellevue Hospital. Here electricity was applied, without benefit, and subsequently, iodide of potassium was administered, but, apparently, not in "efficient" doses, for now, at the end of three months, you recognize partial right hemiplegia still present, with some flexor contraction, and a trembling, on attempting to use the crippled arm, which recalls *paralysis agitans*.

In this case there was no loss of consciousness; and, by the repeated disappearance and return of the paroxysms within short intervals, it would seem that the cerebral substance had at least twice accommodated itself to the pressure of (probably) an intra-cranial gummy tumour before finally yielding to its persistent increase of size. This is the most obvious mode of explaining these successive

waves of approaching paralysis, but I must tell you that the pathological anatomy of this form of disease is still uncertain, for Huebner has shown that most of the symptoms peculiar to cerebral and spinal syphilis may be caused by defective blood-supply as a result of gummatous thickening, to the point of entire occlusion, of the walls of the smaller arteries. But this question is of less practical importance than that of treatment. Even after complete hemiplegia had declared itself in this case, a prompt exhibition of iodide, in steadily increasing doses up to the point of efficiency, ought to have removed the cause of the symptoms more rapidly than the patient's present condition would seem to indicate had been accomplished. If the doses were efficient, we must conclude that the brain substance was broken down by pressure, or that it had become anæmic to the point of atrophy; but most likely the doses were not large enough.

I will remark that, where symptoms like those of this patient are preceded by localized headache, and tenderness on pressure, I should conclude that the gummatous exudation had taken the form of a tumour, rather than of arterial thickening and obstruction.

I bring before you, next, an anæmic looking man of 45, with *loss of muscular power of the right lower limb*. He has been under treatment in this Hospital within a few years for constitutional syphilis, and is now getting better under the use of the iodide. Sensation in the weak limb is, apparently, not much impaired, and as you see, although his gait is suggestive of locomotor ataxy, he walks fairly with his eyes closed. The case is one of muscular *paræsis*, of a single limb, a condition which is not rare, and is exceedingly characteristic of nervous syphilis. A man may awake in the morning with the sensation of "pins and needles" in his arm, and before midday the upper extremity will be entirely powerless. When not the direct result of pressure on the nerves, or of other obvious injury, a case of paralysis of a single limb is almost certainly of syphilitic origin. I have seen a lower extremity

of one side and an upper extremity of the other side of the body simultaneously affected. Not unfrequently both lower limbs are paralyzed, not necessarily completely, although this sometimes happens, but in most cases partially, so that the condition is one of *paresis*, usually, rather than *paralysis*; and there is often a sensation as though a cord were tied around the waist, and the bladder is slow in getting rid of its contents, and the rectum also. These symptoms are caused by gummatous thickening of the theca vertebralis, or by deposit of the same material in the substance of the cord. Partial obliteration of the arteries supplying the cord has also been found, and in some cases serous effusion causing symmetrical pressure by gravitation. Many of the not infrequent cases of partial and irregular paraplegia occurring early in life are due to this variety of *tabes dorsalis*, and I have relieved several cases which had been mistaken for locomotor ataxia.

The fifth case is a man of 45, who entered the hospital for a *defect of vision* which had been increasing gradually for several weeks. He was presented at our last clinic, when we recognized mydriasis and strabismus, also that the trouble in his sight was owing to the fact that he saw objects double. You remember that we made out no distinct history of syphilis, but found a large scar over the parietal bone which the patient explained as the result of a lump which came there without any local injury, and slowly softened, and ulcerated. The evidence was strong enough to justify the trial of antisyphilitic treatment. Now, at the end of a week, you have an opportunity of judging as to the effect of the remedy, and you see that it has aided very much in establishing the diagnosis, for the patient tells us that his sight has vastly improved since he began taking the medicine, and you observe that his squint has almost disappeared. With this, the diplopia has also gone, except when he looks in certain directions, proving that the defect in vision is due to the fact that the muscles of his right eyeball act imperfectly, and do not keep its axis always parallel to that

of the left, in fact that there is paresis of the external rectus, the usual cause of internal strabismus. This weakness of a solitary muscle which has so seriously deranged the eyesight is due to disease of the nerve which supplies it, and this disease is proved, by the action of the remedy, to be syphilis. The nerves which supply the muscles of the eye are not unfrequently affected by syphilis. On more careful inquiry into the patient's history it has been ascertained that he was treated for the primary disease five years ago. The lump on the outside of his head was, therefore, pretty certainly a gummatous node; and the inference is fair as to the existence of a similar tendency to gummatous exudation within the cranium. I would advise, in such a case, that the iodide be continued in sufficient doses until the symptoms shall have entirely disappeared, and that the patient should be then subjected to the prolonged action of mercury in small doses, to diminish the liability to further outbreak.

The sixth case is a man of 81, with *facial paralysis* of some weeks' standing, which came on without any obvious cause. The patient, who is a printer, thinks that "the antimony in the type metal may have something to do with it," and "coming out of a hot room into the cold air." But he had a similar attack seven years ago, with no clearer cause, and before that he says he had "the venereal disease," and took mercury. He has also a depressed, white, circular scar, surrounded by a ring of brown pigment on the outside of his leg, and you see that when I make slight pressure upon the subcutaneous surface of the tibia, he flinches. The paralysis is evidently due to a syphilitic affection of the *portio dura*. The nerve lesion is incomplete or already getting better, for you see that with an effort he can nearly close the eyelids, and his tongue does not deviate. And yet his speech is quite indistinct; he hesitates, mistakes words, and his thoughts seem to come slowly and with effort. These signs indicate lesion of the brain, in addition to that of the cranial nerve; and such a coincidence, in nervous syphilis, often exists. In answer to my question, he says

he has suffered much and long from headache for two years, and also from sleeplessness; and when I ask him if he finds that his memory fails him in his business, and if he is less clear-headed than formerly, he answers promptly, yes. A man's self-regard would lead him to hesitate before confessing that his mind is failing him, unless profoundly conscious of the fact; therefore I feel confidence in the truth of this evidence.

Here is a case of possible proliferation in the neuroglia of the cortical substance, interfering directly with the production of nerve force, by interrupting the function of the nerve-cells. The same lesion may exist in the neurilemma of the *portio dura*; or the periosteum lining the bony canal through which this nerve passes out of the cranium may be thickened in a similar way, and the nerve pressed upon. Or, again, the walls of the arteries at the base of the brain may be the seat of the same pathological change, by which their calibre is diminished and the blood-supply cut off, more or less from the parts of the brain to which they are distributed. I cannot certainly tell you which of these morbid changes is present in the case before you; possibly all of them. They all present a common feature, namely, a tendency to the production of a new material by cell development. This cell proliferation, which apparently does so much harm, is provoked, as far as we can judge, by the presence in the blood of the syphilitic poisonous element, which, in this stage of the disease, is liable to manifest itself by an injurious effect upon the tissues in certain localities, and often after long intervals of health. Why it acts just in this way, that is in certain localities, and at such long intervals, is, to use Mr. Hutchinson's expression, "one of the marvels of pathology." The brain furnishes several of these favourite localities, and when the defective blood has caused trouble here, in the form, probably of perverted nutrition, the first effect produced is an afflux of more blood to repair the damage, and this, constituting congestion, explains the headache. Congestion is followed by cell-proliferation, for the purpose of repair. Thus the pathological phenomena of cere-

bral syphilis in some degree lose their mystery, for they are identical with those which succeed injuries to the tissues from other causes, and come within the modern definition of inflammation. But the effort at repair is abortive, and takes the shape of gummy exudation. In the end, however, in most cases, reparation in some sort is accomplished by development of cicatricial connective tissue; for, after this phase of syphilitic disease shall have passed away, either spontaneously, as it sometimes does, or under the influence of treatment, in the localities where the microscope would have detected cell-proliferation, it now recognises only the more bloodless tissue of cicatrix.

This man asks me anxiously, "Will I get well, sir?" My answer is, "My friend, I have great hope that you will." Now, let me ask you, gentlemen, would this prognosis be at all reasonable, or likely to be justified by the event, if the serious symptoms of brain trouble which this case presents arose from any other form of cerebral disease than this peculiar affection we are engaged in studying? If we had not indubitable evidence in favour of the diagnosis of "cerebral syphilis," the symptoms here present, involving disturbed intelligence and impaired utterance, would point to embolism, or some other serious lesion, and probable softening, with the worst possible prognosis. The prompt and generous exhibition of mercury by inunction, or vapour-bath, with the simultaneous use of iodine in efficient doses, has in my hands been frequently followed by immediate lightening up of these grave symptoms, and by apparently perfect restoration to health. This is a result which never follows treatment in true softening. The diagnosis of syphilis as a cause of nerve lesion carries hope with it, therefore, for the wonderful remedial virtues of mercury and iodine are at your command; and if the lesions are not so old that the stage of cicatrization and contraction has already been reached, these remedies seldom fail to show their power. The iodide should be given, as I advised when speaking of the treatment of rapid gummatous ulceration, in a steadily increasing dose, beginning with

ten grains three times a day, and adding five grains a day to each dose, until the patient is taking a drachm and a half or even two drachms, unless marked amendment has occurred before this amount has been reached, or the stomach has given out. At the same time mercurial inunction, with the oleate, or the blue ointment, should be thoroughly carried out. I add the mercury because there are cases which will not yield to iodine alone; and where serious brain lesion is in question, it is safer to take every chance. And, let me tell you, there is a certain element of prompt audacity required to command success in these cases; a willingness founded on certainty of knowledge, to adopt heroic treatment, unhesitatingly, and without half-way measures, recognizing no other alternative in the way of treatment, by which a fatal issue, or what is even worse, a permanently damaged brain, can be prevented.

Our time has nearly expired, and I have yet other forms of nervous syphilis to speak of. For obvious reasons there has been no case of *epilepsy* or convulsive action brought before you, and to prevent an erroneous impression I hasten to tell you that epilepsy is one of the most common forms of nervous syphilis; indeed, when it makes its appearance after the period of adolescence, epilepsy is, as a rule, due to syphilis. There are certain peculiar features which stamp the disease when of syphilitic origin, such as antecedent headache, or an unexplained failure of the general health; the convulsive action is often partial in character, one limb may be attacked first; sometimes indeed, the fit is confined to an arm or a leg, or to one-half of the body, or there may be only a "half attack;" the loss of consciousness is slower in coming on, is less complete, and even sometimes entirely absent.

I told you once, that the skin symptoms of syphilis are characterized by irregularity; the same is true of its nervous manifestations. In some aspects they resemble hysteria; their very oddness and strangeness are not without a diagnostic value.

I will rapidly enumerate some of the

more irregular nervous phenomena which I have satisfied myself are due to syphilis; sudden and transitory loss of speech, and at the same time, of power of writing; temporary suspension of mental power, with inability, at the moment, to command the ideas and the memory, as well as words, but without aphasia, what Mrs. E. B. Browning would call "vanishings"; sudden lapse of muscular power, perhaps in one limb only, causing the patient to trip or stumble, or to drop anything carried in the hand; tingling beginning at the tips of the fingers or toes, and passing away shortly; or persisting and ending, after a time, in motor paralysis or paresis, of a leg or an arm; tetanoid cramps of the spinal muscles, and more frequently nocturnal, as I have observed them, liable to be followed by temporary paralysis of the intercostal muscles with diaphragmatic breathing; impotence, in most cases temporary or relievable; mania, in one case with violent paroxysms ending fatally; and, finally, satyriasis, in one instance, of the most marked character, the patient having been regarded as the victim of profound and incurable cerebral disease by specialists in Europe. This patient afterwards married, and conducted an important business requiring considerable executive ability.

As to reading on this subject, English medical literature is not very full: Dr. Hughlings Jackson and Dr. Samuel Wilks are excellent authorities, and a small volume by Dr. Buzzard is sound, but puzzling from lack of lucid arrangement. There are several French monographs of great merit, by Lagneau, Zambaco, and Lanceraux. Prof. Keyes not long since collected from my records a number of cases, and, with his own additions, made a paper which I can recommend to you.

## MEDICAL NEWS.

### DOMESTIC INTELLIGENCE.

*American Public Health Association.*—This Society convened at Richmond, Virginia, on the 19th ulto., and remained in session four days. The meeting was largely attended, and was presided over by Dr. Elisha Harris, of New York.

The following resolutions, submitted by the committee appointed to prepare propositions on yellow fever, were adopted.

"That the yellow fever of 1878 was a specific disease, not indigenous to or originating spontaneously in the United States, and its appearance in this country during this year was due to a specific cause." (This statement was adopted by a vote of 33 yeas to 11 nays.)

"That quarantine, established with such vigour and precision as to produce absolute non-intercourse, will prevent the importation of the specific cause of yellow fever, and that it is the duty of the general government to aid in the establishment of such a quarantine, and also to appoint a commission of experts to make investigation into the causes of yellow fever and the best methods of preventing its introduction; also the importance of internal sanitary measures, and urging State and municipal authorities to aid in preventing the introduction of yellow fever."

In the discussion of these propositions, Medical Inspector Albert L. Gihon, U.S.N., put on record the experience, and opinion based on that experience, of the medical officers of the Navy, whom he there represented by the authority of the Navy Department. He believed these to be the unanimous opinions of his colleagues in the Medical Corps.

First. The yellow fever ship is always a foul ship.

Second. Foul ships, while often generating by their filth other endemic diseases, have never yellow fever *de novo*.

Third. When a foul ship visits a port where yellow fever prevails, communication with that place will cause the development of yellow fever aboard that ship.

Fourth. A clean ship may visit a port in which yellow fever is prevalent, and by rigorously abstaining from communication of any kind with that port, will escape yellow fever contamination.

Fifth. When yellow fever appears on board a vessel, the only safety for the crew is to get them out of the ship.

Sixth. The sick can also be removed from the vessel with entire impunity to those among whom they are removed.

Seventh. Nurses and attendants upon

the sick with yellow fever aboard ship are not more liable than other occupants of the vessel to contract yellow fever.

Eighth. When the yellow fever appears aboard a vessel, it is possible to imprison it by battening down the hatches, carefully caulking every possible outlet for emanation from the hold and lower decks, and by requiring the crew to live and sleep in the open air and spar deck, and abstaining from using food, water, clothing, &c., which has been below.

Ninth. If this vessel is removed to a place where bad sanitary conditions prevail, and any of its contents are discharged, it will inevitably disseminate yellow fever.

Tenth. It is believed that in places to leeward currents of air from such an infected vessel will cause the appearance of yellow fever in such places.

Eleventh. Freight, food, baggage, clothing, &c., cannot be safely removed from infected vessels until they have been exposed to the prolonged continuance of extreme cold weather.

Twelfth. No vessel on which yellow fever has prevailed can be safely re-inhabited until after such exposure.

Thirteenth. It is believed, but not entirely demonstrated, that permeation by dry, hot-air steam will destroy the germ of yellow fever.

In conclusion, "It is our belief that yellow fever is due to a specific living germ—the vitality of which may be impaired or destroyed by extreme cold, and which rapidly propagates itself when deposited in a nidus of visible or invisible filth."

Dr. Snow, of Rhode Island, offered the following, which was adopted:

"Resolved, That the heartfelt thanks of this Association and of the whole people of the country are due to Mrs. Elizabeth Thompson, of New York, and to other philanthropic individuals and associations who by their liberal contributions have enabled the Yellow Fever Commission to prosecute its investigations, and also to those who have been concerned in organizing the work of the Commission and in presenting the result of its work to this Association."

The following officers were elected for

the ensuing year: President, Professor J. L. Cabell, of the University of Virginia; Vice-Presidents, Dr. J. S. Billings, U.S.A.; Dr. Samuel Choppin, of New Orleans; Treasurer, Dr. Henry B. Baker, of Michigan; Dr. Edward S. Janes, the Secretary, holds over. The following Executive Committee was elected: Drs. C. B. White, of Louisiana; T. J. Turner, U. S. N.; Ezra M. Hunt, New Jersey; J. D. Plunket, of Nashville, Tenn.; C. F. Folsom, of Massachusetts, and C. A. Hewitt, of Minnesota.

*Medical Society of Virginia.*—The ninth annual session of this Society was held at Richmond October 22d, 23d, 24th, and 25th, Dr. John H. Claiborne, of Petersburg, President, in the chair. One hundred and twenty-eight Fellows were in attendance. The following officers were elected for the ensuing year: President, Levin S. Joynes, M.D., of Richmond; Vice-Presidents, Drs. Herbert Nash, of Norfolk; L. B. Ward, of Smyth; W. P. McGuire, of Winchester; James C. Green, of Danville; and Gabriel McDonald, of Monroe; Secretary, Dr. Landon B. Edwards, of Richmond.

*Surgeon-General of the Navy.*—Surgeon J. WINTHROP TAYLOR has been appointed Surgeon-General of the Navy, vice Surgeon-General Grier, retired on account of age.

**OBITUARY RECORD.**—Died, at Charleston, South Carolina, on the 12th of October, after a brief illness, ELI GEDDINGS, M.D., Professor of Surgery in the Medical College of the State of South Carolina, aged 79 years.

Dr. Geddings was born in Newberry, S. C., in 1799. He received a school and classical education, and read medicine in Abbeville, S. C., subsequently graduating in medicine in the Medical College of the State of South Carolina in 1825. Dr. Geddings was the pioneer in the South among those who deliver courses of public lectures upon anatomy, physiology, and operative surgery to classes independently of any chartered institution; and such were the success and popularity of

his lectures, that numbers throughout the South still bear attestation to the elocutionary readiness, point, and condensation of his teachings even at that early period. A brief sojourn in Europe perfected him in his studies, while the acquisition of several of the modern languages, consorted with a colossal memory, gave him remarkable pre-eminence among many of his colleagues in almost every department of our profession.

Upon his return from Europe, he was appointed Demonstrator of Anatomy in the Medical College in Charleston, though he was soon called to the chair of Anatomy in the University of Maryland, and thence to New York, after which he again returned to Charleston, where he successively filled the chairs of surgery and practice of medicine, upon the death of Prof. Ramsay and resignation of Prof. Samuel H. Dickson and P. Gaillard.

While in Baltimore, Dr. Geddings edited the *North American Archives*, throughout the pages of which work may be found his various contributions to medicine and surgery. His active career as a surgeon supplied him with a collection, particularly of the diseases of bone and of surgical pathology, which now forms a conspicuous feature in the museum of the Medical College of Charleston; and furnished the periodicals of our country with publications of interest.

It has been the privilege of few to have enjoyed so wide a range of influence in any community, and to have exercised so large a share of usefulness during so long a period of professional activity as Prof. Geddings.

With a *physique* as vigorous as the mind was strong and brilliant which animated it, he was still engaged in counselling with and assisting his colleagues in every emergency to within a few days of his death.

#### FOREIGN INTELLIGENCE.

*The Determination of the Cardiac Triangle.*—Dr. CONSTANTINE PAUL proposes the following method in lieu of those at present in use, in order to determine the cardiac triangle. It is necessary to begin by precisely fixing the point correspond-

ing to the apex of the heart; this point being found, its relation must be determined with the points of the thorax more fixed than it; the nipple will not serve as a landmark, by reason of the variability of its position in different individuals; it is necessary to designate the intercostal space at which the apex beats, and to measure the distance between the spot at which the pulsation is perceived and the medium line of the body. This done, the outer border of the liver is determined by percussion; and this line, which is a little below the real line, being extended to the region of the point of the apex, affords the indication of the right border of the heart. To obtain the right and inferior angle, the lung is percussed in the transverse sense, and the zone of dullness is reached which corresponds to the limit of the auricle. This method of insuring the extent of the cardiac triangle allows us, according to M. Paul, to easily define the changes in the size and position of the heart. He presents a series of observations on ventricular hypertrophy with schematic figures in support of his view.—*British Medical Journal*, Oct. 12, 1878.

*Solubility of Chloral in Fatty Bodies.*—M. CATILLON (*Gaz. Hebdom.*, Nov. 1), in a communication to the Société de Thérapeutique, observed that the ready solubility of chloral in considerable proportions in fatty substances is not generally known, and may often prove of great utility in practice. One part of the hydrate is soluble in two of oil. The formula which he recommends is chloral 6 and oil of sweet almonds 80 parts; or chloral 6, lard 27, wax 3 parts. On the same principle, we may make plasters, bougies, or suppositories according to the following formula: chloral 1, white wax 2, and butter of cocoa 2½ parts.—*Medical Times and Gazette*, Nov. 9, 1878.

*Quantitative Test for Urea.*—Dr. ARTHUR GANGE, Brackenbury Professor of Physiology at the Owens College, Manchester, has proposed a new and ready method of very accurately estimating the quantity of urea in urine, by means of a solution of

sodium hypobromite. This solution, which is of a yellow colour, and can be easily prepared by simply pouring bromine into a solution of caustic soda, has the property common to solutions of the alkaline hypobromites, of decomposing urea into carbonic acid and nitrogen. The carbonic acid is absorbed by the alkaline solution, so that the gas which is given off, upon mixing with it a urea-containing liquid such as urine, consists wholly of nitrogen. By measuring therefore in a suitable apparatus, the quantity of gas (nitrogen) evolved on mixing a solution of the hypobromite with a known quantity of urine, the percentage of urea can be estimated with the utmost nicety.—*Medical Times and Gazette*, November 9, 1878.

*The Urine of the Insane.*—M. ALBERT ROBIN (*Société de Biologie*, June 24th) had occasion to examine the urine of a madman who died at the Hospital Beaujon, and communicates the very interesting results of his researches. The quantity of the urine was diminished to 300 grammes in twenty-four hours; the specific gravity was 1030; the reaction acid, remaining so after exposure to the air for eight days. The amount of solids was 25 grammes in twenty-four hours, that of urea only 10.22 grammes, but uric acid, on the contrary, was present in large proportions. The chlorides were diminished, the phosphates normal; sugar and albumen were not present. In the sediment, after evaporation, he found crystals of the hippurate of calcium, margaric acid, leucine, and an enormous quantity of uric acid. Many bacteria of a special nature were found on microscopical examination. M. Robin asks whether it might be possible to inoculate madness by means of urine?—*British Medical Journal*, Oct. 12, 1878.

*Deaths from Chloroform.*—The *British Medical Journal* (Oct. 12, 19, and Nov. 9, 1878) reports three cases.

*Personal.*—Mr. LISTER has been gazetted Surgeon-Extraordinary to Her Majesty Queen Victoria.

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